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July 25, 1989

RECEIVED

JUL 26 1989

OIL CONSERVATION DIVISION

Mr. William J. LeMay  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application of Phillips Petroleum  
Company for Amendment to Division  
Order R-3668-A to Change the Previously  
Approved Unorthodox Locations, and Add  
the San Andres Formation Into its Carbon  
Dioxide ~~(Waterflood)~~ Project, Lea County,  
New Mexico

Case 9737

INJECTION

Dear Mr. LeMay:

On behalf of Phillips Petroleum Company, please find  
enclosed our application for approval of an amendment to  
Division Order R-3668-A to change the locations of the wells  
and to add the San Andres Formation <sup>INTO THE</sup> previously approved <sup>CO<sub>2</sub></sup>  
~~(waterflood)~~ project in the Maljamar Grayburg-San Andres Pool.

Phillips Petroleum Company seeks to drill the wells at  
amended unorthodox locations as follows:

Philmex Well No. 38 - 1,307' FSL and 1,245' FWL, Unit M  
Philmex Well No. 39 - 1,478' FSL and 1,175' FWL, Unit L  
Philmex Well No. 40 - 1,682' FSL and 1,090' FWL, Unit L  
(All wells located in Section 26, T17S, R33E)

These well locations had to be changed as a high pres-  
sure NGL pipeline is located in the immediate Pilot area  
(plat attached).

Enclosed is an amended C-108 Application for Authority  
to inject for the subject case. All offset operators and  
surface owners remain the same.

We would appreciate this application being set for  
hearing at the next available examiner's docket now  
scheduled for August 23, 1989.

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION

RECEIVED

JUL 26 1989

OIL CONSERVATION DIVISION

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY FOR AMENDMENT TO DIVISION  
ORDER R-3668-A TO CHANGE THE  
PREVIOUSLY APPROVED UNORTHODOX  
LOCATIONS, AND ADD THE SAN ANDRES  
FORMATION INTO ITS CARBON DIOXIDE  
FLOOD PROJECT, MALJAMAR GRAYBURG-  
SAN ANDRES POOL, LEA COUNTY,  
NEW MEXICO

INJECTION

CASE NO.

A P P L I C A T I O N

COMES NOW PHILLIPS PETROLEUM COMPANY, by and through  
its attorneys, Kellahin, Kellahin and Aubrey, and applies to  
the New Mexico Oil Conservation Division for the Amendment  
of Division Order R-3668-A to add the San Andres formation  
into its previously approved Maljamar Grayburg-San Andres  
Carbon-Dioxide <sup>injection</sup> ~~Waterflood~~ project and to amend the unorthodox  
locations of its injection wells and two observation  
wells, Lea County, New Mexico and in support thereof would  
show:

1. Applicant, Phillips Petroleum Company, is the  
operator of the Maljamar Grayburg-San Andres Waterflood  
project for the "Philmex" Properties.

2. The Division Order R-3668 entered January 24, 1969  
approved this project area for waterflood operations.

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Order No. R-3668-A  
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(17) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Grayburg and San Andres formations.

(18) The operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the initial step-rate injection test, and of the mechanical integrity pressure-test in order that the same may be witnessed.

(19) The operator should take all steps necessary to ensure that the injected carbon dioxide enters only the proposed injection interval and is not permitted to escape to other formations or at the surface.

(20) Inasmuch as the proposed application has no direct bearing on Division Order No. R-3668, said order should not be amended at this time and therefore all provisions contained in said order should remain in full force and effect.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Phillips Petroleum Company, is hereby authorized to initiate and conduct a pilot carbon dioxide injection project in its previously approved Maljamar Philmex Waterflood Project, by the injection of carbon dioxide into the Grayburg-San Andres formations Maljamar Grayburg-San Andres Pool, through its Philmex Well No. 38 to be drilled at an unorthodox location 1440 feet from the South line and 1340 feet from the West line (Unit K) of Section 26, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico. ←

(2) The applicant is further authorized to drill two observation wells at unorthodox locations in said Section 26 as follows: Philmex Well No. 39 to be drilled 1552 feet from the South line and 1261 feet from the West line (Unit L) and Philmex Well No. 40 to be drilled 1702 feet from the South line and 1156 feet from the West line (Unit L).

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Order No. R-3668-A  
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(3) The tubing in the Philmex Well No. 38 shall be internally plastic-lined; the casing-tubing annulus shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing, and/or packer.

(4) Prior to commencing injection operations, the casing in the subject well shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's district office at Hobbs.

(5) The injection well or system shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1700 psi, provided that prior to injection, the applicant shall conduct a step-rate injection test to accurately determine the fracture pressure of the Grayburg formation.

(6) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected carbon dioxide from the Grayburg formation.

(7) The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of ~~disposal~~ <sup>INJECTION</sup> equipment, of the initial step rate injection test, and of the mechanical integrity pressure test in order that the same may be witnessed.

(8) The operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of carbon dioxide from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(9) The subject project shall be known as the Maljamar Philmex Pilot CO2 Injection Project, and the initial project area shall consist of the SW/4 of said Section 26.

CASE \_\_\_\_\_ :

Application of Phillips Petroleum  
Company to amend Division Order No. R-  
3668-A, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks an amendment to  
Order No. R-3668-A, to change the locations of the wells and to add  
the San Andres Formation

Philmex Well No. 38 located 1,307 feet from the South line and  
1,245 feet from the West line, (Unit M).

Philmex Well No. 39 located 1,478 feet from the South line and  
1,175 feet from the West line, (Unit L).

Philmex Well No. 40 located 1,682 feet from the South line and  
1,090 feet from the West line, (Unit L).

Section 26, Township 17 South, Range 33 East.